

REPORT ON THE IRISH IMPLEMENTATION OF THE INSPIRE DIRECTIVE



Creator Department of Environment, Community and Local Government (DECLG)
Date 30/10/2013
Subject Report on the Irish Implementation of the INSPIRE Directive
Publisher Department of Environment, Community and Local Government (DECLG)
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Format Word document
Language English
Coverage Republic of Ireland
Version 1.0



Comhshaol, Pobal agus Rialtas Áitiúil
Environment, Community and Local Government



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1 Executive Summary

On 1 August 2010, the INSPIRE Directive was transposed into Irish law through Statutory Instrument No. 382 of 2010. This regulation gave legal effect to the Directive in Ireland and outlines how the principles of the INSPIRE Directive are to be embedded and implemented across the different levels of government in the State and across the public, private and voluntary sectors. The regulations will also ensure more rigorous compliance with both the requirements and spirit of the Directive in the areas of what is absolutely required and what is discretionary and, also, in the area of Ministerial implementation responsibilities.

Article 21 of the INSPIRE Directive requires that the Department of Environment, Community and Local Government reports on INSPIRE implementation in Ireland every three years. This is the second INSPIRE Report that the Department has submitted in this process. The accompanying INSPIRE Monitoring document for 2013 is regarded by the Irish Spatial Data Infrastructure project as the baseline for the future compliance monitoring.

2 Abbreviations and Acronyms

LGMA	Local Government Management Agency
DECLG	Department of Environment, Community and Local Government
EPA	Environment Protection Agency
GI	Geographic Information
GIS	Geographic Information System
INSPIRE	Directive 2007/2/EC
IRLOGI	Irish Organisation for Geographical Information
ISDE	Irish Spatial Data Exchange
ISDI	Irish Spatial Data Infrastructure
JRC	Joint Research Centre
SDI	Spatial Data Infrastructure
SI	Statutory Instrument

3 Introduction

3.1 Background

This report has been produced to fulfil the reporting requirements set out in the INSPIRE Directive which requires that the report must be provided to the Commission by 15th May 2013.

The report follows the format set out in the guidance template issued by the Commission.

3.2 Method used to compile the report

This report has been compiled on the basis of documentation relating to the INSPIRE implementation process, Irish eGovernment Strategy 2012-2015 and principles of the ISDI project with oversight and review from the ISDI/INSPIRE Steering Committee.

4 Co-ordination and Quality Assurance

4.1 Co-ordination

Co-ordination of INSPIRE implementation is provided by DECLG through the **ISDI/INSPIRE Steering Committee**.

4.1.1 Member State Contact Point

Name and Contact Information

Member State Contact Point	
Name of the public authority	Department of the Environment, Community and Local Government
Contact information:	
Mailing address	Custom House, Dublin 1, Ireland
Telephone number	+353 1 888 2000
Fax number	+353 1 888 2286
Email address	inspire@environ.ie
Organisation's website URL	http://www.environ.ie
Contact person (if available)	Helen McGrath
Telephone number	+353 53 911 7394
Email address	helen.mcgrath@environ.ie
Contact person - substitute (if available)	Gareth John
Telephone number	+353 1 888 2000
Email address	Gareth.john@environ.ie

Role and Responsibilities

The Minister for the Environment, Community and Local Government has been assigned responsibility by the Irish Government to lead the implementation of the INSPIRE Directive in Ireland.

4.1.2 The Coordination Structure

Name and Contact Information

Coordinating Structure Supporting the MSCP	
Name of the co-ordination structure	ISDI/INSPIRE Steering Committee
Contact information:	
Mailing address	Custom House, Dublin 1, Ireland
Telephone number	+353 1 888 2000
Fax number	+353 1 888 2286
Email address	inspire@environ.ie
Organisation's website URL	http://www.environ.ie
Contact person (if available)	Helen McGrath
Telephone number	+353 53 911 7394
Email address	Helen.mcgrath@environ.ie
Contact person - substitute (if available)	Gareth John
Telephone number	+353 1 888 2000
Email address	gareth.john@environ.ie
Date and period of mandate	Responsibility for ISDI & INSPIRE matters allocated to DoECLG – 2003 Responsibility ongoing

Role and Responsibilities

The main role of the ISDI/INSPIRE Steering Committee is to provide a structure within which various key stakeholder bodies can be represented and make input into the ISDI/INSPIRE implementation process.

The terms of reference of the Committee is to provide a strategic overview and appropriate guidance on the implementation of the INSPIRE Directive.

Organisation

The **ISDI/INSPIRE Steering Committee** has representation from the following organisations:

- Ordnance Survey Ireland (national mapping agency);
- Property Registration Authority;
- Met Éireann (Irish meteorological body);
- Geological Survey Ireland;
- Marine Institute;
- Local authorities as represented by the Local Government Management Agency and the Local Authority GIS Users Group;
- Department of Agriculture, Fisheries and Food;
- National Transport Authority;
- Environment Protection Agency;
- Central Statistics Office.

Further details of the Steering Committee members can be obtained in Annex (A).

The ISDI/INSPIRE Steering Committee has an **INSPIRE Technical Sub-Committee** that has the responsibility for advising the ISDI/INSPIRE Steering Committee on technical matters and auditing for INSPIRE relevant data sets in ISDI. DECLG provides the secretariat for both committees.

Relation with Third Parties

The ISDI/INSPIRE Steering Committee has been developing relationships with the following Irish eGovernment Strategy working groups:

- Spatial Information Working Group;
- Data Sharing Clearinghouse.

Overview of Working Practices and Procedures

An ISDI Working Group was formed in 2003 to take responsibility for advancing the ISDI. With the coming into effect of the INSPIRE Directive, a revised group called the ISDI/INSPIRE Steering Committee was formed. The main discussions at the meetings have been about GI strategy, spatial data sharing policy and INSPIRE implementation. INSPIRE technical issues and guidance are dealt with by the INSPIRE Technical Sub-Committee.

4.1.3 Comments on the Monitoring and Reporting Process

Irish INSPIRE Monitoring List

The Irish INSPIRE Monitoring dataset list has been re-organised since the 2010 report. This is because of a change in methodology in the Irish ISDI project with regards to auditing for INSPIRE datasets. The on-going publication of the INSPIRE Data Specifications has allowed ISDI to focus and prioritise the core spatial data sets that contain the spatial objects specified in the theme Data Specifications. The regional data sets from Irish local authorities are also being collated into national data sets and services for publication and re-use in the INSPIRE and ISDI contexts.

The INSPIRE Monitoring and Reporting process to date has been a basic process but there is a plan to automate monitoring for certain technical aspects through a central node in the GeoPortal.ie website.

INSPIRE Technical Compliance Monitoring

INSPIRE Technical Compliance Monitoring takes place at a formal level through the INSPIRE Technical Sub-Committee and the INSPIRE Managed Service processes. Some aspects will be measured quantitatively through toolsets which are being developed on the Irish INSPIRE GeoPortal.ie website. See the section 4.2.1 for Quality Assurance Procedures for more details.

Reporting

Reporting takes place with stakeholders on a formal level through meetings and issued communications of the ISDI/INSPIRE Steering Committee.

In 2010, 2011 and 2012 DECLG was allocated approximately two hour periods at the IRLOGI annual conferences¹ in which it reported to the wider Irish GI community on progress to date on ISDI and INSPIRE related issues and obtained feedback from delegates.

4.2 Quality Assurance

ISDI Quality assurance procedures are being developed as the INSPIRE implementation programme progresses. This is being approached on a theme-by-theme basis as the data modelling of the INSPIRE theme Data Specifications takes place.

4.2.1 Quality Assurance Procedures

INSPIRE Theme Delivery Plans

An INSPIRE Theme Delivery Plan is being designed for each of the 34 INSPIRE themes by an INSPIRE Theme Working Group which consists of the INSPIRE Data Owners for each of the themes. These plans will contain a section that deals with data quality issues for the theme.

There will be two distinct areas of analysis for data quality:

- Data Quality requirements of each INSPIRE theme's Data Specification;
- ISDI re-use cases and fitness for purpose – the fitness for purpose of the source datasets for the identified ISDI re-use cases in government and also for uses beyond the defined public tasks.

Where necessary, the INSPIRE Theme Working Groups will make recommendations on steps required to improve overall INSPIRE data quality on their respective theme datasets.

INSPIRE Metadata Validation

The ISDI Metadata Profile version 1.2 was published in March 2013. This update to the profile added a metadata encoding document that guarantees that all ISDI catalogue implementations will be harmonised and compliant with the INSPIRE Metadata Technical Guidance.

The ISDI Metadata Profile has been rolled out into two separate metadata solutions in the ISDI network of organisations based on GeoNetwork and ESRI Geoportal Server. Therefore, ISDI partner organisations have an option of setting up their own INSPIRE compliant metadata catalogue or entering their INSPIRE-compliant metadata directly on the GeoPortal.ie website.

¹ GI/SDI conference for Ireland. IRLOGI is a non-aligned non-profit organisation which has membership of departments, state agencies, local authorities, private companies, university research institutes and private persons which have an interest in GI/SDI matters.

An ISDI Metadata record validation tool in the form of a schematron program is currently being developed by the ISDI/INSPIRE Technical Sub-committee. The GeoPortal.ie central catalogue will not allow ISDI Metadata Profile records to be harvested if they are not in the right xml schema.

INSPIRE Network Services - Metadata Validation

INSPIRE Network Services set up through the INSPIRE Managed Service and published through GeoPortal.ie are validated using the INSPIRE metadata validator before they are published.

INSPIRE Network Services – OGC Standards Conformance

There are no ISDI toolsets developed yet for this type of testing but the German SDI-DE Test Suite has been used as part of the INSPIRE Protected Sites pilot and has proved invaluable for this type of testing.

Network Service – Quality of Service Monitoring

Network Service Quality of Service² is being monitored at a central point at the GeoPortal.ie location. The Con Terra Service Monitor software is currently being rolled out for this purpose.

4.2.2 Analysis of Quality Assurance Problems

There are no formal analyses of Quality Assurances undertaken so far in the ISDI/INSPIRE project.

4.2.3 Measures taken to Improve Quality Assurance

See section 4.2.1

4.2.4 Quality Certification Mechanisms

No formal quality certification system is in place.

5 Functioning and Co-ordination of the Infrastructure

5.1 General Overview Description of the SDI

INSPIRE principles, standards, and guidance documents are being used to establish the technical infrastructure and data sharing governance needed for the successful implementation of a wider ranging ISDI.

GeoPortal.ie - a central managed service and Geoportal website for IRISH INSPIRE data publication

The INSPIRE Directive was transposed into Irish law through Statutory Instrument No. 382 of 2010. The creation of an 'INSPIRE geo-portal' for Ireland was legislated for in the Irish INSPIRE implementing regulations³:

“INSPIRE geo-portal” means an Irish Internet site, or equivalent, providing access to the services referred to in Regulation 5(1) and which links to a European geo-portal established in terms of paragraph 1 of Article 15 of the INSPIRE Directive;”

² As required by the Commission Regulation (EC) No 976/2009 of 19 October 2009 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the Network Services.

³ Regulation 3(1) of Statutory Instrument No.382 of 2010

Ordnance Survey of Ireland (OSi) provides the INSPIRE geo-portal and supporting functions through a managed service as agreed with DECLG. The roles and responsibilities of both parties with respect to that managed service are laid out in a formal Memorandum of Understanding document.

eGovernment Strategy 2012-2015 – Department of Public Expenditure and Reform⁴

Further to addressing the statutory obligation to deliver the INSPIRE Infrastructure and services under the Irish INSPIRE implementing regulations and the Directive, the Irish INSPIRE programme is also designed in-line with the vision of current national e-government policy for the use of ICT shared services for data publishing and sharing in government. The Irish INSPIRE managed service project is aligned with the following actions in the “Supporting Public Service Reform eGovernment Strategy 2012 – 2015”:

- **Action 27** – Public bodies will evaluate the potential for exploiting digital mapping and GIS technologies in ways that are affordable, sustainable and of relevance to the customer bases of their services, taking into account the personal or commercial sensitivities of the data;
- **Action 28** – Public bodies will identify data sets they hold that contain location based data and will make these details available to other public bodies where appropriate to reduce duplication and to facilitate greater area-based targeting of public services;
- **Action 21** - All public bodies will publish appropriate data in machine-readable formats to facilitate re-use;
- **Action 41** - When new eGovernment services are being developed, these will, where appropriate, be designed to support cross-organisational data sharing opportunities and to facilitate interoperability;
- **Action 42** - Public Bodies will make data that is in high demand from other Public Bodies available across Government Networks for re-use, as appropriate and where legally permissible, to minimise duplication in data-sharing.

5.2 INSPIRE Stakeholders

The Irish INSPIRE data sharing arrangements (see section 5.4) have categorised a number of stakeholders involved in the INSPIRE data publication in ISDI. These stakeholders and their roles are described below:

INSPIRE Data Owner

An INSPIRE Data Owner is an Irish public body that owns INSPIRE data included on the ISDI Register.

The INSPIRE Data Owner is responsible for delivering the INSPIRE data to the INSPIRE Data Provider for publication through the OSi INSPIRE managed service and Geoportal.ie website.

INSPIRE Data Provider

DECLG is the INSPIRE Data Provider.

The INSPIRE Data Provider facilitates the provision of the data to the INSPIRE Data Publisher in an agreed exchange format, standard, schema and agreed update frequency. The onus is on the INSPIRE Data

⁴ *Department of Public Expenditure and Reform Supporting Public Service Reform: eGovernment 2012 – 2015.*

Owner and Provider to audit the source data for specific issues such as data privacy, copyright, security, Intellectual Property Rights etc.

INSPIRE Data Publisher

OSi is the INSPIRE Data Publisher.

The INSPIRE Data Publisher publishes the INSPIRE data received from the INSPIRE Data Provider through the OSi INSPIRE geo-portal website Geoportal.ie under the terms of the INSPIRE managed service as agreed with DECLG.

INSPIRE Data and Service Users

The parties using the INSPIRE data sets and services shared through Irish INSPIRE Data sharing arrangements (through Irish INSPIRE licences) are identified in this section.

(a) Specified users in the INSPIRE Regulation on Data and Service Sharing

The Irish INSPIRE data sharing arrangements facilitate the required INSPIRE data sharing arrangements between Irish INSPIRE Data Owners and the following parties specified in the INSPIRE Regulation on Data and Service Sharing:

- Other Irish public bodies;
- EU Institutions and bodies, and their contractors (for the purposes of public tasks that may have an impact on the environment);
- Bodies established by international agreements to which the European Community and Member States are parties (for the purposes of public tasks that may have an impact on the environment);
- Public authorities from other member states, and their contractors (for the purposes of public tasks that may have an impact on the environment).

(b) Pre-approved major emergency data and service users

- Users from the Principal Response Agencies detailed in Appendix F1 of *A Framework for Major Emergency Management*⁵ will be pre-approved by the Office of Emergency Planning in the Department of Environment, Community and Local Government.

The Irish INSPIRE data sharing arrangements also give access to the spatial data and services covered by this Agreement to a pre-approved list of parties from the Principal Response Agencies in the event of a major emergency. The list will be managed by DECLG and the Office of Emergency Planning. This arrangement will be communicated to the signatories of the INSPIRE Data Sharing Agreement.

Open Data and other re-use cases:

- General public;
- Commercial and non-commercial users.

⁵ Department of Environment and Local Government (2011), *Implementing the INSPIRE Directive regulations in public bodies*, Dublin: Appendix F1. Available: <http://www.environ.ie/en/LocalGovernment/FireandEmergencyServices/EmergencyPlanning/PublicationsDocuments/FileDownload,797,en.pdf> . Last Accessed 29/04/2013.

The Department of Environment, Community and Local Government is working with INSPIRE Data Owners to release and license the INSPIRE data, where possible as 'Open Data' to facilitate: increased citizen access to environmental information in line with Directive 2003/4/EC on Public Access to Information on the Environment and the Aarhus Convention, and also to maximise re-use for purposes beyond the public task for which it was created, as advised by the Directive 2003/98/EC on the re-use of public sector information (PSI Directive).

Linked Data approach

DECLG is currently working through the update to the INSPIRE Generic Conceptual Model and is beginning to design URI sets based on http addresses to enable Linked Data developments. An initial Linked Data pilot is currently being discussed.

5.3 Role of the Various Stakeholders

See comments in section 5.2.

5.4 Measures taken to Facilitate Sharing

Irish INSPIRE data sharing arrangements

Irish INSPIRE Data Sharing arrangements have been designed to directly address the following legislation and policy:

- [INSPIRE Directive \(Article 17\):](#)
- [INSPIRE Data and Service Sharing Regulation](#) ;
- [Irish INSPIRE Regulation SI No 382 of 2010](#) .
- [Irish eGovernment Strategy 2012-2015](#).
- [Irish PSI Regulations SI No 279 of 2005](#)
- [Access to information on the environment regulations SI No 133 of 2007](#)
- [Aarhus convention](#).

GeoPortal.ie INSPIRE portal website and INSPIRE Managed Service – enabling the sharing of Irish INSPIRE spatial data

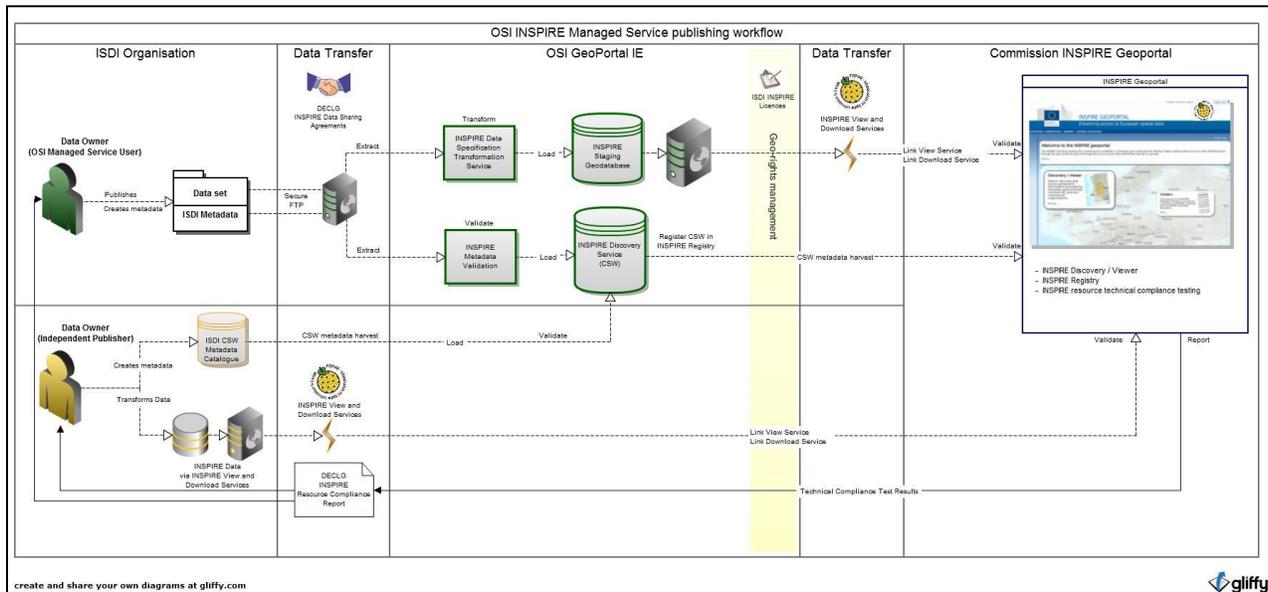
The INSPIRE Directive was transposed into Irish law through Statutory Instrument No. 382 of 2010. The creation of an 'INSPIRE geo-portal' for Ireland was legislated for in the Irish INSPIRE implementing regulations⁶:

"INSPIRE geo-portal" means an Irish Internet site, or equivalent, providing access to the services referred to in Regulation 5(1) and which links to a European geo-portal established in terms of paragraph 1 of Article 15 of the INSPIRE Directive;"

The INSPIRE Data Sharing arrangements organise the publication of the declared Irish INSPIRE datasets through the Irish INSPIRE Geoportal to connect into the EU INSPIRE portal and wider INSPIRE network of re-use.

The Irish INSPIRE Geoportal is operated by OSi and was set up through an INSPIRE Managed Service agreement with DECLG. The roles and responsibilities of both parties are outlined in a formal Memorandum of Understanding document.

⁶ Regulation 3(1) of Statutory Instrument No.382 of 2010



The INSPIRE Managed Service enables Irish public authorities to make their spatial data sets and services available into the INSPIRE network of services.

The INSPIRE Data Owners have two options to publish their spatial data:

- Use the OSi managed service to transform and serve their data and metadata;
- Publish spatial data resources independently and reference the metadata for their published spatial data resources on the Irish INSPIRE Geoportal central Discovery Service.

Irish INSPIRE Data Sharing Agreement

This Agreement addresses the Data Sharing requirements of Article 17 of the INSPIRE Directive and the supplementing INSPIRE Data and Service Sharing Regulation.⁷

This Agreement introduces initial 'measures'⁸ that facilitate the sharing and 'INSPIRE use' of INSPIRE spatial data sets and services for the following scenarios:

- between Irish public bodies;
- between Irish public bodies and institutions and bodies of the European Community;
- between Irish public bodies and bodies established by international agreements to which the European Community and Member States are parties;
- between Irish public bodies and public bodies from other member states.

The measures covered by this Agreement will enable the necessary parties to gain access to INSPIRE spatial data sets and services and to exchange and use those INSPIRE spatial data sets and services under the terms of the INSPIRE Directive and supporting regulations.

⁷ COMMISSION REGULATION (EU) No 268/2010 of 29 March 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions.

⁸ Article 17(1) Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).

This Agreement aims to provide a first step in removing 'practical obstacles, occurring at the point of use'⁹, to the sharing of Irish INSPIRE spatial data sets and services through the Irish GeoPortal.

The Agreement facilitates the publication of the INSPIRE Data Owner spatial data through DECLG to a centrally managed service to be published as INSPIRE Network Services by the OSi. It also covers the INSPIRE data owner sharing obligations that must be addressed for INSPIRE and other data regulations e.g. Data Protection Acts, PSI regulations and licensing, Access to Information on the Environment, etc. This INSPIRE data publication workflow is also relevant to Actions 27 and 28 in the current eGovernment Strategy 2012-2015.

INSPIRE Theme Delivery Plans

The ISDI project has created INSPIRE Theme Delivery Plans as the transformation process is progressed for each INSPIRE Data Specification. The plans are brief documents that record the following for the data listed in each of the INSPIRE themes:

1. Participant Details – contact person for each INSPIRE Data Owner organisation;
2. List of data set names for the INSPIRE theme Data Specification, and legal reference for its collection (if applicable);
3. List of spatial features and attribution provided from each of the Irish source datasets;
4. Gap analysis of mandatory features and attribution not available from Irish public bodies;
5. Identified obstacles to ISDI and INSPIRE data sharing;
6. Delivery Strategy and update cycle for each data resource;
7. Data exchange formats and system interfaces;
8. Re-use cases of each data set in ISDI;
9. Data quality assessment and Quality control improvement.

ISDI Licence Framework

When spatial data has been requested under the terms of the INSPIRE regulations for what is determined to be legitimate environmental public tasks, Irish public bodies must deliver the data sets and network services accompanied by the appropriate ISDI licence.

- **ISDI Basic Licence** (Irish PSI Licence)
This licence covers INSPIRE data sets or services that may be considered as Open Data and are free to re-use for commercial and non-commercial use and are disseminated under government copyright and a basic attribution requirement. The Irish PSI licence is to be used in this case.¹⁰
- **ISDI INSPIRE Specific Licence** (INSPIRE non-commercial use & INSPIRE restricted use)
This licence covers INSPIRE data sets and services which are not free to re-use for all uses, and may have charges/licensing that apply or restricted use conditions for specific re-use scenarios. This licence is available as a template and it is the responsibility of the INSPIRE Data Owners and the INSPIRE Data Provider to adapt the optional elements of the licence to their specific INSPIRE publication needs.

5.5 Stakeholder Co-operation

The ISDI/INSPIRE Steering Committee provides the basis for co-operation amongst key stakeholders with a focus on broad policy, data sharing and strategic matters.

⁹ Article 17(2) Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).

¹⁰ Department of Finance(2005). *Irish Public Sector Information Licence*. Available: <http://www.psi.gov.ie/files/2010/03/PSI-Licence.pdf> . Last accessed 25/04/2013.

The ISDI Technical Sub-committee provides the basis for discussions and cooperation amongst selected Steering Committee members on issues of a technical nature.

The ISDI Metadata Group provides a forum for the discussion and planning for the ISDI Metadata Profile and catalogues. This group is also tasked with URI design for Linked Data applications for Irish INSPIRE resources.

5.6 Access to Services through the INSPIRE Geo-portal

The Irish GeoPortal.ie INSPIRE Discovery Service CSW instance will be connected to the EU Geo-portal in July 2013, replacing the pilot project catalogue.

6 Usage of the Infrastructure for Spatial Information

6.1 Use of Spatial Data Services in the SDI

As of June 2013, the Irish data for the Administrative Units, Protected Sites and Cadastral Parcels themes have been transformed into the corresponding INSPIRE Data Specifications. They have been published into INSPIRE View (based on WMS 1.3) and INSPIRE Direct Access Download Services (based on WFS 2.0).

These Network Services have not been in active use for very long so it is not possible to comment on their level of use so far.

6.2 Use of the Spatial Data sets

Similarly, GeoPortal.ie the INSPIRE portal for Ireland was launched on 24 June 2013 and as it has not been in active use for very long it is not possible to comment on the level of use of the datasets and Network Services yet.

6.3 Use of the SDI by the General Public

See section 6.2 above.

6.4 Cross-border Usage

A series of meetings have taken place between officials from ISDI in Ireland with counterparts in the Land and Property Services Northern Ireland with the aim of exploring issues associated with INSPIRE implementation. A number of key areas have been highlighted for cross-border cooperation on INSPIRE:

- North-south Discovery Service linking;
- Sharing of background mapping services on portals;
- Harmonising approaches to Data Specification modelling, e.g. service breakdown, naming conventions, download services approach;
- Data Specification Feature matching at the border;
- Geo-rights management experience in Spatial NI;
- Harmonising licensing and Geo-rights management approaches for North-South INSPIRE data sharing;
- Cross-border SDI initiatives: Integrated Transport Network, Environmental Emergency Response, Land use.

Examples of cross-border SDI-related initiatives

There are a number of pre-existing cross-border spatial data sharing initiatives that will be built on as part of the ISDI/INSPIRE implementation project. A number of the more notable examples are listed below.

(a) OSi Map Genie service

MapGenie, the OSi map service, allows a user to connect directly from his/her desktop to both OSi and Land and Property Services Northern Ireland (LPS) geodatabases via an All-Ireland Web Service, giving the user easy and instant access through a single source to premium map data at a variety of scales for the entire island of Ireland.

(b) Tellus Border project

Tellus Border is an EU INTERREG IVA-funded regional mapping project collecting geo-environmental data on soils, water and rocks across six border counties (Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth) and continuing the analysis of existing data in Northern Ireland. The project is a cross-border initiative between the Geological Survey of Northern Ireland, the Geological Survey of Ireland, Queen's University Belfast and Dundalk Institute of Technology.

(c) All-island Research Observatory (AIRO)

The All Island Research Observatory is a research unit in the National University of Ireland, Maynooth which has produced an interactive spatial data website based. AIRO seeks to produce all-island, spatial datasets and specialist tools to aid their analysis and to undertake academic and applied mapping research. AIRO aims to act as a single point of access to a wide variety of spatial data and information about the various regions of Ireland. The intended audience of this site are planners, policy makers, researchers and those interested in gaining an understanding of the dynamics that are shaping the island of Ireland today.

(d) Myplan.ie

Myplan.ie is an initiative of DOECLG which provides a planning information service (web pages and geobrowsers) for the Republic. It contains information such as land use zoning, flooding, location of all dwellings and businesses, schools, Natura 2000 sites etc. Zoning information for Northern Ireland is currently in the process of being included into Myplan.ie.

6.5 Use of Transformation Services

There has as yet been no development of INSPIRE Transformation Services. The INSPIRE Managed Service is currently carrying out offline transformations of source data sets.

7 Data Sharing Arrangements

7.1 Data sharing Arrangements between Public Authorities

There has been no over-arching data sharing arrangement/agreement yet between Irish public authorities.

However, the INSPIRE Data Sharing Agreement is being viewed as a catalyst for improving the spatial data sharing environment in the Irish public sector. Publishing through the GeoPortal.ie and INSPIRE Managed Service requires INSPIRE Data Owners to publish their data under one of the licence in the emerging ISDI Licence Framework.

The current Irish eGovernment Strategy 2012-2015 has set up a 'Spatial Information Working Group' which is reviewing the best course of action to address the actions in the Irish eGovernment Strategy which were outlined in section 5.1 of this report.

7.2 Data Sharing Arrangements between Public Authorities and Community Institutions and Bodies

The Data Sharing Arrangements between Public Authorities and Community Institutions and Bodies is outlined in section 5.4 of this report; specifically through the **Irish INSPIRE Data Sharing Agreement** and the **ISDI Licence Framework**.

These developments are deemed to be transitional. It is anticipated that in future collective licensing arrangements can be organised nationally through an ISDI public sector mapping agreement which would for example involve all government bodies obtaining OSi reference mapping and such information being available to European Institutions and bodies.

7.3 Barriers to the Sharing and the Actions taken to Overcome Them

Within government (national and local), there are some identified administrative, legal and financial barriers to spatial data sharing. These barriers arise because of the necessity to make payment for certain data sets, address data protection legislation, lack of coordination on licensing, and an absence of a government policy on spatial information.

Ordnance Survey Ireland is the main provider of certain kinds of spatial data (base mapping, ortho-imagery, certain vector datasets etc.) and given the business model under which it operates, it requires payment for its data. In this light, the INSPIRE licence framework has been developed to accommodate this (see section 5.4).

As a pre-emptive move, the Data Sharing Agreement (see section 5.4) aims to provide a first step in identifying and removing the 'practical obstacles, occurring at the point of use'¹¹, to the sharing of Irish INSPIRE spatial data sets and services through the Irish GeoPortal

8 Cost / Benefit Aspects

8.1 Costs Resulting from Implementing the INSPIRE Directive

The total costs associated with implementing the Directive were not systematically being measured across all stakeholders until 2013. However, it is envisaged that an overall cost tracking arrangement will now be put in place. To date, costs associated with staff time and subsistence and travel have been incorporated into 'normal' departmental/agency operating budgets.

Some costs were identified by stakeholders and they are summarised below:

Set-up costs for GeoPortal.ie web portal and OSI/DECLG Managed Service

Description	Cost
Central GeoPortal.ie CSW and Editor customised to use ISDI Metadata Profile	€13,000
GeoPortal.ie technical architecture costs: spatial data services software solution, geo-rights management, security solutions, systems architecture consultancy	€45,500
Total expenditure	€58,500

¹¹ Article 17(2) Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).

INSPIRE Pilot Project – Protected Sites

Description	Cost
INSPIRE Pilot environment architecture set up	€17,080
INSPIRE Data modelling and consultancy	€17212.50
Total expenditure	€34,292.50

INSPIRE Cadastral Parcels Project

Description	Cost
INSPIRE Data modelling, licence design, security and general consultancy	€59,481
Coordination and horizontal measures	€5,372
Total expenditure	€64,853

GeoNetwork – ISDI Metadata Profile Integration and schematron development

Description	Cost
Development of customised INSPIRE/ISDI compliant GeoNetwork 2.8 solution with schematron.	€38,734.75
Total expenditure	€38,734.75

8.2 Benefits observed

Due to the recent launch of the GeoPortal.ie website with associated Spatial Data Services and metadata catalogue, it is too early to determine quantifiable benefits. However, based on reviews of international best practice and case studies, it is hoped that the following benefits will be realised:

- The development of a National GeoPortal – will promote a shared service approach to INSPIRE publishing will drive efficiencies across the public sector domain.
- ISDI metadata standards will improve data compatibility, access and sharing both intra and inter organisations.
- Public bodies will reduce the cost of modelling and publishing spatial data.
- Centralised INSPIRE compliance management will lessen the INSPIRE burden on individual public organisations.
- Several public organisations have adopted the principle of 'Open Data' and this will encourage an increased re-use of environmental data beyond the public task for which it was created.
- The Irish implementation of the INSPIRE Directive will increase collaboration among the ISDI members and between the CSO and their European partners (Eurostat, the European Forum for Geostatistics)
- There will be increased awareness of INSPIRE and SDI within Departments and other public service bodies

- Irish e-government policy makers will be better informed of the benefits of spatial information, and of how to effectively manage, publish and share it according to INSPIRE principles.

9 Conclusions

This report has been compiled with reference to documentation relating to the INSPIRE implementation process, Irish eGovernment Strategy 2012-2015 and principles of the ISDI project with oversight and review from the ISDI/INSPIRE Steering Committee.

The setting up of the GeoPortal.ie website represents a significant milestone for an Irish SDI. This development has given greater momentum to the project with greater buy in from senior managers and other stakeholders. The INSPIRE Monitoring and Reporting process to date has been a basic process but there is a plan to automate monitoring for certain technical aspects through a central node in the GeoPortal.ie website.

There are a number of pre-existing cross-border spatial data sharing initiatives that will be built on as part of the ISDI/INSPIRE implementation project.

A lot of time was spent ensuring an effective data sharing agreement was confirmed with stakeholders. Overall, progress to date has been somewhat slower than what may be hoped, but with the groundwork in place, implementation should be more manageable and it is hoped will lead to a speedier delivery.

Annex (A)

List of Organisations – Names and Contact Details

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Annex (B)

List of References for the Compilation of the Report

Article 17(8) Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).

COMMISSION REGULATION (EU) No 268/2010 of 29 March 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions.

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